



SEQUENCE LISTING

RECEIVED  
UNIVERSITY  
TECH CENTER 1600 2900

<110> Cwenty & R.

<120> SHORT BIOACTIVE PEPTIDES

<130> HELX027

<140>

<141>

<160> 165

<170> PatentIn Ver. 2.1

<210> 1

<211> 23

<212> PRT

<213> ARTIFICIAL SEQUENCE

<220>

<223> SYNTHETIC SEQUENCE

<400> 1

Phe Ala Leu Ala Leu Lys Ala Leu Lys Lys Ala Leu Lys Lys Leu Lys  
1 5 10 15

Lys Ala Leu Lys Lys Ala Leu  
20

<210> 2

<211> 23

<212> PRT

<213> ARTIFICIAL SEQUENCE

<220>

<223> SYNTHETIC SEQUENCE

<220>

<221> MOD\_RES

<222> (23)

<223> AMIDATION

<400> 2

Phe Ala Leu Ala Leu Lys Ala Leu Lys Lys Ala Leu Lys Lys Leu Lys  
1 5 10 15

Lys Ala Leu Lys Lys Ala Leu  
20

<210> 3

<211> 38

<212> PRT

<213> ARTIFICIAL SEQUENCE

<210>  
<211> SYNTHETIC SEQUENCE

<400> 3  
Met Pro Lys Trp Lys Val Phe Lys Lys Ile Glu Lys Val Gly Arg Asn  
1 5 10 15  
Ile Arg Asn Gly Ile Val Lys Ala Gly Pro Ala Ile Ala Val Leu Gly  
20 25 30  
Glu Ala Lys Ala Leu Gly  
35

<210> 4  
<211> 23  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (23)  
<223> AMIDATION

<400> 4  
Phe Ala Lys Lys Leu Ala Lys Lys Leu Lys Lys Leu Ala Lys Lys Leu  
1 5 10 15  
Ala Lys Leu Ala Leu Ala Leu  
20

<210> 5  
<211> 38  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (38)  
<223> AMIDATION

<400> 5  
Met Pro Lys Trp Lys Val Phe Lys Lys Ile Glu Lys Val Gly Arg Asn  
1 5 10 15  
Ile Arg Asn Gly Ile Val Lys Ala Gly Pro Ala Ile Ala Val Leu Gly  
20 25 30  
Glu Ala Lys Ala Leu Gly  
35

<210> 6  
<211> 23  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<400> 6  
Phe Ala Lys Lys Leu Ala Lys Lys Leu Lys Lys Leu Ala Lys Lys Leu  
1 5 10 15

Ala Lys Leu Ala Leu Ala Leu  
20

<210> 7  
<211> 23  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (23)  
<223> AMIDATION

<400> 7  
Gly Ile Gly Lys Phe Leu His Ser Ala Lys Lys Phe Gly Lys Ala Phe  
1 5 10 15

Val Gly Gly Ile Met Asn Ser  
20

<210> 8  
<211> 23  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (23)  
<223> AMIDATION

<400> 8  
Phe Ala Leu Ala Ala Lys Ala Leu Lys Lys Leu Ala Lys Lys Leu Lys  
1 5 10 15

Lys Leu Ala Lys Lys Ala Leu

<210> 9  
 <211> 23  
 <212> PPT  
 <213> ARTIFICIAL SEQUENCE

<220>  
 <223> SYNTHETIC SEQUENCE

<220>  
 <221> MOD\_RES  
 <222> (23)  
 <223> AMIDATION

<400> 9  
 Phe Ala Leu Ala Leu Lys Ala Leu Lys Lys Leu Leu Lys Lys Leu Lys  
           1                  5                  10                  15

Lys Leu Ala Lys Lys Ala Leu  
                   20

<210> 10  
 <211> 23  
 <212> PPT  
 <213> ARTIFICIAL SEQUENCE

<220>  
 <223> SYNTHETIC SEQUENCE

<220>  
 <221> MOD\_RES  
 <222> (23)  
 <223> AMIDATION

<400> 10  
 Phe Ala Leu Ala Leu Lys Ala Leu Lys Lys Leu Ala Lys Lys Leu Lys  
           1                  5                  10                  15

Lys Leu Ala Lys Lys Ala Leu  
                   20

<210> 11  
 <211> 21  
 <212> PPT  
 <213> ARTIFICIAL SEQUENCE

<220>  
 <223> SYNTHETIC SEQUENCE

<220>  
 <221> MOD\_RES  
 <222> (21)  
 <223> AMIDATION

<400> 11

Phe Ala Leu Ala Lys Leu Ala Lys Lys Ala Lys Ala Lys Leu Lys Lys  
1 5 10 15

Ala Leu Lys Ala Leu  
20

<210> 12

<211> 19

<212> PFT

<213> ARTIFICIAL SEQUENCE

<220>

<223> SYNTHETIC SEQUENCE

<220>

<221> MOD\_RES

<222> (19)

<223> AMIDATION

<400> 12

Phe Ala Leu Ala Leu Lys Ala Leu Lys Lys Leu Lys Lys Ala Leu Lys  
1 5 10 15

Lys Ala Leu

<210> 13

<211> 19

<212> PRT

<213> ARTIFICIAL SEQUENCE

<220>

<223> SYNTHETIC SEQUENCE

<400> 13

Phe Ala Leu Ala Leu Lys Ala Leu Lys Lys Leu Lys Lys Ala Leu Lys  
1 5 10 15

Lys Ala Leu

<210> 14

<211> 19

<212> PRT

<213> ARTIFICIAL SEQUENCE

<220>

<223> SYNTHETIC SEQUENCE

<400> 14

Phe Ala Lys Lys Leu Ala Lys Lys Leu Lys Lys Leu Ala Lys Leu Ala  
1 5 10 15

Leu Ala Leu

<210> 15  
<211> 23  
<212> PFT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (23)  
<223> AMIDATION

<400> 15  
Val Ala Leu Ala Leu Lys Ala Leu Lys Lys Ala Leu Lys Lys Leu Lys  
1 5 10 15

Lys Ala Leu Lys Lys Ala Leu  
20

<210> 16  
<211> 16  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (16)  
<223> AMIDATION

<400> 16  
Phe Ala Leu Ala Leu Lys Lys Ala Leu Lys Ala Leu Lys Lys Ala Leu  
1 5 10 15

<210> 17  
<211> 17  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (17)  
<223> AMIDATION

<400> 17  
Phe Ala Lys Lys Leu Ala Lys Leu Ala Lys Lys Leu Ala Lys Leu Ala  
1 5 10 15

Leu

<210> 18  
<211> 19  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (19)  
<223> AMIDATION

<400> 18  
Phe Ala Lys Lys Leu Ala Lys Leu Ala Lys Lys Leu Ala Lys Leu Ala  
1 5 10 15

Leu Ala Leu

<210> 19  
<211> 23  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (13)..(14)  
<223> Xaa = D-lysine

<400> 19  
Phe Ala Leu Ala Leu Lys Ala Leu Lys Lys Ala Leu Xaa Xaa Leu Lys  
1 5 10 15

Lys Ala Leu Lys Lys Ala Leu  
20

<210> 20  
<211> 15  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<210>  
<221> MOD\_RES  
<222> (15)  
<223> AMIDATION

<400> 20  
Phe Ala Lys Lys Leu Ala Lys Leu Ala Lys Lys Leu Leu Ala Leu  
1 5 10 15

<210> 21  
<211> 15  
<212> PPT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (15)  
<223> AMIDATION

<400> 21  
Phe Ala Lys Lys Leu Ala Lys Leu Ala Lys Lys Ala Leu Ala Leu  
1 5 10 15

<210> 22  
<211> 15  
<212> PPT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (15)  
<223> AMIDATION

<400> 22  
Phe Ala Leu Ala Lys Lys Ala Leu Lys Lys Ala Lys Lys Ala Leu  
1 5 10 15

<210> 23  
<211> 19  
<212> PPT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES



<222> (19)  
<223> AMIDATION

<400> 13  
Phe Ala Lys Lys Leu Ala Lys Lys Leu Lys Lys Leu Ala Lys Leu Ala  
1 5 10 15

Leu Ala Lys

<210> 24  
<211> 22  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (22)  
<223> AMIDATION

<400> 24  
Gly Ile Gly Lys Phe Leu Lys Lys Ala Lys Lys Phe Gly Lys Ala Phe  
1 5 10 15

Val Lys Ile Leu Lys Lys  
20

<210> 25  
<211> 13  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (13)  
<223> AMIDATION

<400> 25  
Phe Ala Lys Leu Leu Ala Lys Leu Ala Lys Lys Leu Leu  
1 5 10

<210> 26  
<211> 15  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<210>  
<211> MOD\_RES  
<222> (15)  
<223> AMIDATION

<400> 26  
Phe Ala Lys Lys Leu Ala Lys Leu Ala Leu Lys Leu Ala Lys Leu  
1 5 10 15

<210> 27  
<211> 14  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (14)  
<223> AMIDATION

<400> 27  
Phe Ala Lys Lys Leu Ala Lys Lys Leu Ala Lys Leu Ala Leu  
1 5 10

<210> 28  
<211> 15  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (15)  
<223> AMIDATION

<400> 28  
Phe Ala Lys Lys Leu Lys Lys Leu Ala Lys Leu Ala Lys Lys Leu  
1 5 10 15

<210> 29  
<211> 12  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES

<212> (12)  
<213> AMIDATION

<400> 29  
Phe Ala Lys Lys Ala Leu Lys Ala Leu Lys Lys Leu  
1 5 10

<210> 30  
<211> 13  
<212> PFT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (13)  
<223> AMIDATION

<400> 30  
Val Ala Lys Leu Leu Ala Lys Leu Ala Lys Lys Leu Leu  
1 5 10

<210> 31  
<211> 12  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (12)  
<223> AMIDATION

<400> 31  
Phe Ala Lys Leu Leu Ala Lys Leu Ala Lys Lys Leu  
1 5 10

<210> 32  
<211> 17  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (17)  
<223> AMIDATION

<400> 32  
Val Ala Lys Lys Leu Ala Lys Leu Ala Lys Lys Leu Ala Lys Leu Ala  
1 5 10 15

Leu

<210> 33  
<211> 15  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (15)  
<223> AMIDATION

<400> 33  
Lys Trp Lys Leu Phe Lys Lys Ile Gly Ala Val Leu Lys Val Leu  
1 5 10 15

<210> 34  
<211> 13  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (13)  
<223> AMIDATION

<400> 34  
Phe Ala Lys Leu Leu Ala Lys Leu Ala Lys Lys Ala Leu  
1 5 10

<210> 35  
<211> 13  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (13)  
<223> AMIDATION

<400> 35  
Phe Ala Lys Leu Leu Ala Lys Ala Leu Lys Lys Leu Leu  
1 5 10

<210> 36  
<211> 13  
<212> PPT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (13)  
<223> AMIDATION

<400> 36  
Phe Ala Lys Leu Leu Lys Leu Ala Ala Lys Lys Leu Leu  
1 5 10

<210> 37  
<211> 10  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (10)  
<223> AMIDATION

<400> 37  
Phe Ala Lys Leu Leu Ala Lys Lys Leu Leu  
1 5 10

<210> 38  
<211> 10  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (10)  
<223> AMIDATION

<400> 38  
Phe Ala Lys Lys Leu Ala Lys Ala Leu Leu  
1 5 10

<210> 39  
<211> 10  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (10)  
<223> AMIDATION

<400> 39  
Phe Ala Lys Lys Leu Ala Lys Lys Leu Leu  
1 5 10

<210> 40  
<211> 9  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (9)  
<223> AMIDATION

<400> 40  
Phe Ala Lys Leu Ala Lys Lys Leu Leu  
1 5

<210> 41  
<211> 17  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<400> 41  
Phe Ala Lys Lys Leu Ala Lys Leu Ala Lys Lys Leu Ala Lys Leu Ala  
1 5 10 15

Leu

<210> 42  
<211> 13  
<212> PRT

<213> ARTIFICIAL SEQUENCE

<220>

<223> SYNTHETIC SEQUENCE

<220>

<221> MOD\_RES

<222> (13)

<223> AMIDATION

<400> 42

Ile Leu Pro Trp Lys Trp Pro Trp Trp Pro Trp Arg Arg  
1 5 10

<210> 43

<211> 15

<212> PRT

<213> ARTIFICIAL SEQUENCE

<220>

<223> SYNTHETIC SEQUENCE

<220>

<221> MOD\_RES

<222> (15)

<223> AMIDATION

<400> 43

Phe Ala Lys Ala Leu Lys Ala Leu Leu Lys Ala Leu Lys Ala Leu  
1 5 10 15

<210> 44

<211> 13

<212> PRT

<213> ARTIFICIAL SEQUENCE

<220>

<223> SYNTHETIC SEQUENCE

<220>

<221> MOD\_RES

<222> (13)

<223> AMIDATION

<400> 44

Phe Ala Lys Leu Leu Ala Lys Leu Ala Lys Ala Lys Leu  
1 5 10

<210> 45

<211> 13

<212> PRT

<213> ARTIFICIAL SEQUENCE

<220>

<23> SYNTHETIC SEQUENCE

<20>

<21> MOD\_RES

<22> (13)

<23> AMIDATION

<400> 45

Phe Ala Lys Leu Leu Ala Lys Leu Ala Lys Leu Lys Leu  
1 5 10

<210> 46

<211> 21

<212> PRT

<213> ARTIFICIAL SEQUENCE

<220>

<223> SYNTHETIC SEQUENCE

<220>

<221> MOD\_RES

<222> (22)

<223> AMIDATION

<400> 46

Phe Ala Lys Lys Leu Ala Lys Lys Leu Lys Lys Leu Ala Lys Lys Leu  
1 5 10 15

Ala Lys Lys Trp Lys Leu  
20

<210> 47

<211> 18

<212> PRT

<213> ARTIFICIAL SEQUENCE

<220>

<223> SYNTHETIC SEQUENCE

<400> 47

Phe Ala Lys Lys Leu Ala Lys Lys Leu Lys Lys Leu Ala Lys Lys Leu  
1 5 10 15

Ala Lys

<210> 48

<211> 22

<212> PRT

<213> ARTIFICIAL SEQUENCE

<220>

<223> SYNTHETIC SEQUENCE



<400> 48

Phe Ala Lys Lys Leu Ala Lys Lys Leu Lys Lys Leu Ala Lys Lys Leu  
1 5 10 15

Ala Lys Lys Trp Lys Leu  
20

<210> 49

<211> 23

<212> PFT

<213> ARTIFICIAL SEQUENCE

<220>

<223> SYNTHETIC SEQUENCE

<220>

<221> MOD\_RES

<222> (23)

<223> AMIDATION

<400> 49

Lys Trp Lys Leu Phe Lys Lys Lys Thr Lys Leu Phe Lys Lys Phe Ala  
1 5 10 15

Lys Lys Leu Ala Lys Lys Leu  
20

<210> 50

<211> 13

<212> PFT

<213> ARTIFICIAL SEQUENCE

<220>

<223> SYNTHETIC SEQUENCE

<220>

<221> MOD\_RES

<222> (13)

<223> AMIDATION

<400> 50

Phe Ala Lys Lys Leu Ala Lys Lys Leu Ala Lys Ala Leu  
1 5 10

<210> 51

<211> 13

<212> PFT

<213> ARTIFICIAL SEQUENCE

<220>

<223> SYNTHETIC SEQUENCE

<220>

<221> MOD\_RES

<222> (13)  
<223> AMIDATION

<400> 51  
Phe Ala Lys Lys Leu Ala Lys Lys Leu Ala Lys Leu Leu  
1 5 10

<210> 52  
<211> 14  
<212> PFT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (14)  
<223> AMIDATION

<400> 52  
Phe Ala Lys Lys Leu Ala Lys Lys Leu Ala Lys Ala Ala Leu  
1 5 10

<210> 53  
<211> 15  
<212> PFT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (15)  
<223> AMIDATION

<400> 53  
Phe Ala Lys Lys Leu Ala Lys Lys Ala Lys Leu Ala Lys Lys Leu  
1 5 10 15

<210> 54  
<211> 12  
<212> PFT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (12)  
<223> AMIDATION

<400> 54  
Phe Ala Lys Lys Leu Lys Lys Leu Ala Lys Lys Leu  
1 5 10

<210> 55  
<211> 23  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<400> 55  
Lys Thr Lys Leu Phe Lys Lys Phe Ala Lys Lys Leu Ala Lys Lys Leu  
1 5 10 15

Lys Lys Leu Ala Lys Lys Leu  
20

<210> 56  
<211> 23  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<400> 56  
Lys Trp Lys Leu Phe Lys Lys Lys Thr Lys Leu Phe Lys Lys Phe Ala  
1 5 10 15

Lys Lys Leu Ala Lys Lys Leu  
20

<210> 57  
<211> 13  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<400> 57  
Ile Leu Pro Trp Lys Trp Pro Trp Trp Pro Trp Arg Arg  
1 5 10

<210> 58  
<211> 13  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (13)  
<223> AMIDATION

<400> 58  
Phe Ala Lys Ala Leu Ala Lys Leu Ala Lys Lys Leu Leu  
1 5 10

<210> 59  
<211> 13  
<212> PFT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (13)  
<223> AMIDATION

<400> 59  
Phe Ala Lys Leu Leu Ala Lys Leu Ala Lys Lys Ala Ala  
1 5 10

<210> 60  
<211> 13  
<212> PKT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (13)  
<223> AMIDATION

<400> 60  
Phe Ala Lys Leu Leu Ala Leu Ala Leu Lys Leu Lys Leu  
1 5 10

<210> 61  
<211> 13  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES

<210> (13)  
<223> AMIDATION

<400> 61  
Phe Ala Lys Leu Leu Ala Lys Leu Ala Lys Ala  
1 5 10

<210> 62  
<211> 13  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (13)  
<223> AMIDATION

<400> 62  
Phe Ala Lys Leu Leu Ala Lys Leu Ala Lys Ala Lys Gly  
1 5 10

<210> 63  
<211> 31  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (31)  
<223> AMIDATION

<400> 63  
Phe Ala Lys Lys Leu Ala Lys Lys Leu Lys Lys Leu Ala Lys Lys Leu  
1 5 10 15

Ala Lys Leu Ala Leu Ala Leu Lys Ala Leu Ala Leu Lys Ala Leu  
20 25 30

<210> 64  
<211> 23  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<400> 64  
Phe Ala Lys Lys Leu Ala Lys Lys Leu Lys Lys Leu Ala Lys Lys Leu

1

5

10

15

Ile Gly Ala Val Leu Lys Val  
20

<210> 65  
<211> 13  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (13)  
<223> AMIDATION

<400> 65  
Phe Ala Lys Leu Leu Ala Lys Ala Leu Lys Leu Lys Leu  
1 5 10

<210> 66  
<211> 13  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (13)  
<223> AMIDATION

<400> 66  
Phe Ala Lys Leu Leu Ala Lys Ala Leu Lys Lys Ala Leu  
1 5 10

<210> 67  
<211> 12  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (12)  
<223> AMIDATION

<400> 67  
Phe Ala Lys Leu Leu Ala Lys Ala Leu Lys Lys Leu

1

5

10

<210> 68  
<211> 20  
<212> PFT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (10)  
<223> AMIDATION

<400> 68  
Lys Trp Lys Leu Phe Lys Lys Ala Leu Lys Lys Leu Lys Lys Ala Leu  
1 5 10 15

Lys Lys Ala Leu  
20

<210> 69  
<211> 23  
<212> PFT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (23)  
<223> AMIDATION

<400> 69  
Lys Ile Ala Lys Val Ala Leu Ala Lys Leu Gly Ile Gly Ala Val Leu  
1 5 10 15

Lys Val Leu Thr Thr Gly Leu  
20

<210> 70  
<211> 12  
<212> PFT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (12)  
<223> AMIDATION

<400> 70  
Pro Ala Lys Lys Leu Ala Lys Leu Ala Lys Lys Leu  
1 5 10

<210> 71  
<211> 19  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (19)  
<223> AMIDATION

<400> 71  
Met Pro Lys Glu Lys Val Phe Leu Lys Ile Glu Lys Met Gly Arg Asn  
1 5 10 15

Ile Arg Asn

<210> 72  
<211> 26  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (26)  
<223> AMIDATION

<400> 72  
Gly Ile Gly Ala Val Leu Lys Val Leu Thr Thr Gly Leu Pro Ala Leu  
1 5 10 15

Ile Ser Trp Ile Lys Arg Lys Arg Gln Gln  
20 25

<210> 73  
<211> 16  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>



<221> MOD\_RES  
<222> (16)  
<223> AMIDATION

<400> 73

Phe Ala Lys Lys Leu Ala Lys Leu Ala Lys Lys Leu Ala Lys Ala Leu  
1 5 10 15

<210> 74  
<211> 11  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (12)  
<223> AMIDATION

<400> 74

Phe Ala Lys Lys Leu Leu Ala Lys Ala Leu Lys Leu  
1 5 10

<210> 75  
<211> 13  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (13)  
<223> AMIDATION

<400> 75

Phe Ala Lys Phe Leu Ala Lys Phe Leu Lys Lys Ala Leu  
1 5 10

<210> 76  
<211> 13  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (13)  
<223> AMIDATION

<400> 76

Phe Ala Lys Leu Leu Phe Lys Ala Leu Lys Lys Ala Leu  
1 5 10

<210> 77

<211> 13

<212> PRT

<213> ARTIFICIAL SEQUENCE

<220>

<223> SYNTHETIC SEQUENCE

<220>

<221> MOD\_RES

<222> (13)

<223> AMIDATION

<400> 77

Phe Ala Lys Leu Leu Ala Lys Phe Leu Lys Lys Ala Leu  
1 5 10

<210> 78

<211> 13

<212> PRT

<213> ARTIFICIAL SEQUENCE

<220>

<223> SYNTHETIC SEQUENCE

<220>

<221> MOD\_RES

<222> (13)

<223> AMIDATION

<400> 78

Phe Ala Lys Leu Leu Ala Lys Ala Phe Lys Lys Ala Leu  
1 5 10

<210> 79

<211> 13

<212> PRT

<213> ARTIFICIAL SEQUENCE

<220>

<223> SYNTHETIC SEQUENCE

<220>

<221> MOD\_RES

<222> (13)

<223> AMIDATION

<400> 79

Phe Ala Lys Leu Phe Ala Lys Ala Phe Lys Lys Ala Leu

<210> 80  
<211> 13  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (13)  
<223> AMIDATION

<400> 80  
Phe Ala Lys Leu Leu Ala Lys Ala Leu Lys Lys Phe Leu  
1 5 10

<210> 81  
<211> 14  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (14)  
<223> AMIDATION

<400> 81  
Phe Ala Lys Leu Leu Ala Lys Ala Leu Lys Lys Phe Ala Leu  
1 5 10

<210> 82  
<211> 14  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (14)  
<223> AMIDATION

<400> 82  
Phe Ala Lys Leu Leu Ala Lys Leu Ala Lys Lys Phe Ala Leu  
1 5 10

<210> 83  
<211> 14  
<212> PFT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (14)  
<223> AMIDATION

<400> 81  
Phe Ala Lys Leu Phe Ala Lys Leu Ala Lys Lys Phe Ala Leu  
1 5 10

<210> 84  
<211> 13  
<212> PFT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (13)  
<223> AMIDATION

<400> 84  
Phe Lys Leu Ala Phe Lys Leu Ala Lys Lys Ala Phe Leu  
1 5 10

<210> 85  
<211> 10  
<212> PFT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (10)  
<223> AMIDATION

<400> 85  
Phe Ala Lys Leu Leu Ala Lys Leu Ala Lys  
1 5 10

<210> 86  
<211> 13  
<212> PFT

<213> ARTIFICIAL SEQUENCE

<220>

<223> SYNTHETIC SEQUENCE

<220>

<221> MOD\_RES

<222> (13)

<223> AMIDATION

<400> 86

Phe Ala Lys Leu Leu Ala Lys Leu Ala Lys Lys Val Leu  
1 5 10

<210> 87

<211> 13

<212> PRT

<213> ARTIFICIAL SEQUENCE

<220>

<223> SYNTHETIC SEQUENCE

<220>

<221> MOD\_RES

<222> (13)

<223> AMIDATION

<400> 87

Phe Ala Lys Leu Leu Ala Lys Leu Ala Lys Lys Ile Leu  
1 5 10

<210> 88

<211> 13

<212> PRT

<213> ARTIFICIAL SEQUENCE

<220>

<223> SYNTHETIC SEQUENCE

<220>

<221> MOD\_RES

<222> (13)

<223> AMIDATION

<400> 88

Phe Ala Lys Leu Leu Ala Lys Leu Ala Lys Lys Glu Leu  
1 5 10

<210> 89

<211> 13

<212> PRT

<213> ARTIFICIAL SEQUENCE

<220>

<223> SYNTHETIC SEQUENCE

<220>

<221> MOD\_RES

<222> (13)

<223> AMIDATION

<400> 89

Phe Ala Lys Leu Leu Ala Lys Leu Ala Lys Lys Ser Leu  
1 5 10

<210> 90

<211> 5

<212> PRT

<213> ARTIFICIAL SEQUENCE

<220>

<223> SYNTHETIC SEQUENCE

<220>

<221> MOD\_RES

<222> (5)

<223> AMIDATION

<400> 90

Phe Ala Lys Leu Ala  
1 5

<210> 91

<211> 5

<212> PRT

<213> ARTIFICIAL SEQUENCE

<220>

<223> SYNTHETIC SEQUENCE

<220>

<221> MOD\_RES

<222> (5)

<223> AMIDATION

<400> 91

Phe Ala Lys Leu Phe  
1 5

<210> 92

<211> 5

<212> PRT

<213> ARTIFICIAL SEQUENCE

<220>

<223> SYNTHETIC SEQUENCE

<220>

<221> MOD\_RES  
<222> (5)  
<223> AMIDATION

<400> 92  
Lys Ala Lys Leu Phe  
1 5

<210> 93  
<211> 5  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (5)  
<223> AMIDATION

<400> 93  
Lys Trp Lys Leu Phe  
1 5

<210> 94  
<211> 13  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (13)  
<223> AMIDATION

<400> 94  
Phe Gly Lys Gly Ile Gly Lys Val Gly Lys Lys Leu Leu  
1 5 10

<210> 95  
<211> 15  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (15)  
<223> AMIDATION

<400> 95

Phe Ala Phe Gly Lys Gly Ile Gly Lys Val Gly Lys Lys Leu Leu  
1 5 10 15

<210> 96

<211> 23

<212> PFT

<213> ARTIFICIAL SEQUENCE

<220>

<223> SYNTHETIC SEQUENCE

<220>

<221> MOD\_RES

<222> (22)

<223> AMIDATION

<400> 96

Phe Ala Lys Ala Ile Ala Lys Ile Ala Phe Gly Lys Gly Ile Gly Lys  
1 5 10 15

Val Gly Lys Lys Leu Leu  
20

<210> 97

<211> 23

<212> PFT

<213> ARTIFICIAL SEQUENCE

<220>

<223> SYNTHETIC SEQUENCE

<220>

<221> MOD\_RES

<222> (22)

<223> AMIDATION

<400> 97

Phe Ala Lys Leu Trp Ala Lys Leu Ala Phe Gly Lys Gly Ile Gly Lys  
1 5 10 15

Val Gly Lys Lys Leu Leu  
20

<210> 98

<211> 12

<212> PRT

<213> ARTIFICIAL SEQUENCE

<220>

<223> SYNTHETIC SEQUENCE

<220>



<221> MOD\_RES  
<222> (12)  
<223> AMIDATION

<400> 98  
Phe Ala Lys Leu Trp Ala Lys Leu Ala Lys Lys Leu  
1 5 10

<210> 98  
<211> 13  
<212> PFT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (13)  
<223> AMIDATION

<400> 99  
Phe Ala Lys Gly Val Gly Lys Val Gly Lys Lys Ala Leu  
1 5 10

<210> 100  
<211> 15  
<212> PFT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (15)  
<223> AMIDATION

<400> 100  
Phe Ala Phe Gly Lys Gly Ile Gly Lys Ile Gly Lys Lys Gly Leu  
1 5 10 15

<210> 101  
<211> 16  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (16)  
<223> AMIDATION

<400> 101

Phe Ala Lys Ile Ile Ala Lys Ile Ala Lys Lys Ile Leu  
1 5 10 15

<210> 102

<211> 15

<212> PFT

<213> ARTIFICIAL SEQUENCE

<220>

<223> SYNTHETIC SEQUENCE

<220>

<221> MOD\_RES

<222> (15)

<223> AMIDATION

<400> 102

Phe Ala Phe Ala Lys Ile Ile Ala Lys Ile Ala Lys Lys Ile Ile  
1 5 10 15

<210> 103

<211> 7

<212> PFT

<213> ARTIFICIAL SEQUENCE

<220>

<223> SYNTHETIC SEQUENCE

<220>

<221> MOD\_RES

<222> (7)

<223> AMIDATION

<400> 103

Phe Ala Leu Ala Leu Lys Ala  
1 5

<210> 104

<211> 12

<212> PFT

<213> ARTIFICIAL SEQUENCE

<220>

<223> SYNTHETIC SEQUENCE

<220>

<221> MOD\_RES

<222> (12)

<223> AMIDATION

<400> 104

Lys Trp Lys Leu Ala Lys Lys Ala Leu Ala Leu Leu

<210> 105  
<211> 12  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (12)  
<223> AMIDATION

<400> 105  
Phe Ala Lys Ile Ile Ala Lys Ile Ala Lys Lys Ile  
1 5 10

<210> 106  
<211> 12  
<212> PFT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (12)  
<223> AMIDATION

<400> 106  
Phe Ala Leu Ala Leu Lys Ala Leu Lys Lys Ala Leu  
1 5 10

<210> 107  
<211> 8  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (8)  
<223> AMIDATION

<400> 107  
Phe Ala Leu Lys Ala Leu Lys Lys  
1 5

<210> 108  
<211> 13  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (13)  
<223> AMIDATION

<400> 108  
Lys Tyr Lys Lys Ala Leu Lys Lys Leu Ala Lys Leu Leu  
1 5 10

<210> 109  
<211> 17  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (17)  
<223> AMIDATION

<400> 109  
Phe Lys Arg Leu Ala Lys Ile Lys Val Leu Arg Leu Ala Lys Ile Lys  
1 5 10 15

Arg

<210> 110  
<211> 13  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (13)  
<223> AMIDATION

<400> 110  
Phe Ala Lys Leu Ala Lys Lys Ala Leu Ala Lys Leu Leu  
1 5 10

<210> 111  
<211> 13  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (13)  
<223> AMIDATION

<220>  
<221> MOD\_RES  
<222> (13)  
<223> AMIDATION

<400> 111  
Lys Ala Lys Leu Ala Lys Lys Ala Leu Ala Lys Leu Leu  
1 5 10

<210> 112  
<211> 17  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (17)  
<223> AMIDATION

<400> 112  
Lys Leu Ala Leu Lys Leu Ala Leu Lys Ala Leu Lys Ala Ala Lys Leu  
1 5 10 15

Ala

<210> 113  
<211> 11  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (11)  
<223> AMIDATION

<400> 113  
Phe Ala Lys Leu Leu Ala Lys Leu Ala Lys Lys  
1 5 10

<210> 114  
<211> 13  
<212> PPT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (13)  
<223> AMIDATION

<400> 114  
Phe Ala Lys Leu Leu Ala Lys Leu Ala Lys Lys Gly Leu  
1 5 10

<210> 115  
<211> 17  
<212> PPT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (17)  
<223> AMIDATION

<400> 115  
Phe Ala Leu Lys Ala Leu Lys Lys Leu Lys Lys Ala Leu Lys Lys Ala  
1 5 10 15

Leu

<210> 116  
<211> 13  
<212> PPT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (13)  
<223> AMIDATION

<400> 116  
Val Ala Lys Leu Leu Ala Lys Leu Ala Lys Lys Val Leu  
1 5 10

<210> 117  
<211> 13  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (13)  
<223> AMIDATION

<400> 117  
Tyr Ala Lys Leu Leu Ala Lys Leu Ala Lys Lys Ala Leu  
1 5 10

<210> 118  
<211> 17  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (17)  
<223> AMIDATION

<400> 118  
Lys Leu Leu Lys Leu Leu Lys Leu Tyr Lys Lys Leu Leu Lys Leu  
1 5 10 15

Leu

<210> 119  
<211> 26  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (26)  
<223> AMIDATION

<400> 119  
Phe Ala Val Gly Leu Arg Ala Ile Lys Arg Ala Leu Lys Lys Leu Arg  
1 5 10 15

Arg Gly Val Arg Lys Val Ala Lys Asp Leu  
20 25

<210> 120  
<211> 16  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (16)  
<223> AMIDATION

<400> 120  
Lys Leu Ala Lys Lys Leu Ala Lys Leu Ala Lys Ala Leu  
1 5 10 15

<210> 121  
<211> 16  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<400> 121  
Lys Leu Ala Lys Lys Leu Ala Lys Leu Ala Lys Ala Leu  
1 5 10 15

<210> 122  
<211> 9  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (9)  
<223> AMIDATION

<400> 122  
Lys Trp Lys Lys Leu Ala Lys Lys Trp  
1 5



<210> 123  
<211> 9  
<212> PPT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<400> 123  
Lys Trp Lys Lys Leu Ala Lys Lys Trp  
1 5

<210> 124  
<211> 17  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (17)  
<223> AMIDATION

<400> 124  
Lys Leu Trp Lys Lys Trp Ala Lys Lys Trp Leu Lys Leu Trp Lys Ala  
1 5 10 15

Trp

<210> 125  
<211> 16  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<400> 125  
Lys Leu Trp Lys Lys Trp Ala Lys Lys Trp Leu Lys Leu Trp Lys Ala  
1 5 10 15

<210> 126  
<211> 11  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES

<222> (11)  
<223> AMIDATION

<400> 126  
Phe Ala Leu Ala Leu Lys Ala Leu Lys Lys Leu  
1 5 10

<210> 127  
<211> 11  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (11)  
<223> AMIDATION

<400> 127  
Phe Ala Leu Ala Lys Ala Leu Lys Lys Ala Leu  
1 5 10

<210> 128  
<211> 12  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (12)  
<223> AMIDATION

<400> 128  
Phe Ala Leu Ala Leu Lys Leu Ala Lys Lys Ala Leu  
1 5 10

<210> 129  
<211> 6  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (6)  
<223> AMIDATION

<400> 129  
Phe Ala Leu Leu Lys Leu  
1 5

<210> 130  
<211> 10  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (10)  
<223> AMIDATION

<400> 130  
Phe Ala Leu Ala Leu Lys Ala Leu Lys Lys  
1 5 10

<210> 131  
<211> 10  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (10)  
<223> AMIDATION

<400> 131  
Phe Ala Leu Lys Ala Leu Lys Lys Ala Leu  
1 5 10

<210> 132  
<211> 11  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (11)  
<223> AMIDATION

<400> 132  
Phe Ala Leu Leu Lys Ala Leu Lys Lys Ala Leu  
1 5 10

<210> 133  
<211> 4  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (4)  
<223> AMIDATION

<400> 133  
Lys Trp Lys Lys  
1

<210> 134  
<211> 5  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (5)  
<223> AMIDATION

<400> 134  
Lys Trp Lys Lys Leu  
1 5

<210> 135  
<211> 9  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (9)  
<223> AMIDATION

<400> 135  
Lys Phe Lys Lys Leu Ala Lys Lys Phe  
1 5

<210> 136

<211> 9  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (9)  
<223> AMIDATION

<400> 136  
Lys Phe Lys Lys Leu Ala Lys Lys Trp  
1 5

<210> 137  
<211> 11  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (11)  
<223> AMIDATION

<400> 137  
Phe Ala Leu Ala Leu Lys Ala Leu Lys Lys Ala  
1 5 10

<210> 138  
<211> 12  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (12)  
<223> AMIDATION

<400> 138  
Phe Ala Leu Leu Lys Ala Leu Leu Lys Lys Ala Leu  
1 5 10

<210> 139  
<211> 11  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<210>  
<213> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (11)  
<223> AMIDATION

<400> 139  
Phe Ala Leu Ala Leu Lys Leu Ala Lys Lys Leu  
1 5 10

<210> 140  
<211> 11  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (11)  
<223> AMIDATION

<400> 140  
Leu Lys Lys Leu Ala Lys Leu Ala Leu Ala Phe  
1 5 10

<210> 141  
<211> 11  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (11)  
<223> AMIDATION

<400> 141  
Val Ala Leu Ala Leu Lys Ala Leu Lys Lys Leu  
1 5 10

<210> 142  
<211> 10  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<210>  
<211> MOD\_RES  
<212> (10)  
<213> AMIDATION

<400> 142  
Phe Ala Leu Ala Leu Lys Leu Lys Lys Leu  
1 5 10

<210> 143  
<211> 10  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (10)  
<223> AMIDATION

<400> 143  
Phe Ala Leu Ala Leu Lys Ala Lys Lys Leu  
1 5 10

<210> 144  
<211> 4  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (4)  
<223> AMIDATION

<400> 144  
Phe Ala Leu Ala  
1

<210> 145  
<211> 5  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES

<222> (5)  
<223> AMIDATION

<400> 145  
Trp Ala Leu Ala Leu  
1 5

<210> 146  
<211> 23  
<212> PFT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (23)  
<223> AMIDATION

<400> 146  
Gly Ile Gly Lys Phe Leu His Ala Ala Lys Lys Phe Ala Lys Ala Phe  
1 5 10 15

Val Ala Glu Ile Met Asn Ser  
20

<210> 147  
<211> 23  
<212> PFT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (23)  
<223> AMIDATION

<400> 147  
Phe Ala Lys Lys Phe Ala Lys Lys Phe Lys Lys Phe Ala Lys Lys Phe  
1 5 10 15

Ala Lys Phe Ala Phe Ala Phe  
20

<210> 148  
<211> 10  
<212> PFT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE



<220>  
<221> MOD\_RES  
<222> (10)  
<223> AMIDATION

<400> 148  
Lys Lys Val Val Phe Lys Val Lys Phe Lys  
1 5 10

<210> 149  
<211> 10  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (10)  
<223> AMIDATION

<400> 149  
Phe Lys Val Lys Phe Lys Val Lys Val Lys  
1 5 10

<210> 150  
<211> 36  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (38)  
<223> AMIDATION

<400> 150  
Leu Pro Lys Trp Lys Val Phe Lys Lys Ile Glu Lys Val Gly Arg Asn  
1 5 10 15

Ile Arg Asn Gly Ile Val Lys Ala Gly Pro Ala Ile Ala Val Leu Gly  
20 25 30

Glu Ala Lys Ala Leu Gly  
35

<210> 151  
<211> 23  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<210>  
<213> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (23)  
<223> AMIDATION

<400> 151  
Phe Ala Lys Lys Leu Ala Lys Lys Leu Lys Lys Leu Ala Lys Lys Leu  
1 5 10 15

Ala Lys Leu Ala Lys Lys Leu  
20

<210> 152  
<211> 15  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (15)  
<223> AMIDATION

<400> 152  
Val Ala Lys Ala Leu Lys Ala Leu Leu Lys Ala Leu Lys Ala Leu  
1 5 10 15

<210> 153  
<211> 13  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (13)  
<223> AMIDATION

<400> 153  
Val Ala Lys Phe Leu Ala Lys Phe Leu Lys Lys Ala Leu  
1 5 10

<210> 154  
<211> 23  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (23)  
<223> AMIDATION

<400> 154  
Val Ala Lys Lys Phe Ala Lys Lys Phe Lys Lys Phe Ala Lys Lys Phe  
1 5 10 15

Ala Lys Phe Ala Phe Ala Phe  
20

<210> 155  
<211> 19  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (19)  
<223> AMIDATION

<400> 155  
Val Ala Lys Lys Leu Ala Lys Leu Ala Lys Lys Leu Ala Lys Leu Ala  
1 5 10 15

Leu Ala Leu

<210> 156  
<211> 15  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (15)  
<223> AMIDATION

<400> 156  
Val Ala Lys Lys Leu Ala Lys Leu Ala Lys Lys Leu Leu Ala Leu  
1 5 10 15

<210> 157

<211> 13  
<212> PFT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (13)  
<223> AMIDATION

<400> 157  
Val Ala Lys Leu Leu Ala Lys Ala Leu Lys Lys Leu Leu  
1 5 10

<210> 158  
<211> 23  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (23)  
<223> AMIDATION

<400> 158  
Val Ala Leu Ala Leu Lys Ala Leu Lys Lys Ala Leu Lys Lys Leu Lys  
1 5 10 15

Lys Ala Leu Lys Lys Ala Leu  
20

<210> 159  
<211> 23  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<400> 159  
Val Ala Leu Ala Leu Lys Ala Leu Lys Lys Ala Leu Lys Lys Leu Lys  
1 5 10 15

Lys Ala Leu Lys Lys Ala Leu  
20

<210> 160  
<211> 23  
<212> PRT

<213> ARTIFICIAL SEQUENCE

<220>

<223> SYNTHETIC SEQUENCE

<220>

<221> MOD\_RES

<222> (23)

<223> AMIDATION

<400> 160

Val Ala Leu Ala Leu Lys Ala Leu Lys Lys Leu Ala Lys Lys Leu Lys  
1 5 10 15

Lys Leu Ala Lys Lys Ala Leu  
20

<210> 161

<211> 23

<212> PRT

<213> ARTIFICIAL SEQUENCE

<220>

<223> SYNTHETIC SEQUENCE

<220>

<221> MOD\_RES

<222> (23)

<223> AMIDATION

<400> 161

Val Ala Leu Ala Leu Lys Ala Leu Lys Lys Leu Leu Lys Lys Leu Lys  
1 5 10 15

Lys Leu Ala Lys Lys Ala Leu  
20

<210> 162

<211> 23

<212> PRT

<213> ARTIFICIAL SEQUENCE

<220>

<223> SYNTHETIC SEQUENCE

<400> 162

Phe Ala Lys Lys Leu Ala Lys Lys Leu Lys Lys Leu Ala Lys Lys Leu  
1 5 10 15

Ala Lys Leu Ala Leu Ala Leu  
20

<210> 163

<211> 30

<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<400> 163  
Phe Ala Lys Lys Leu Ala Lys Lys Leu Lys Lys Leu Ala Lys Lys Leu  
1 5 10 15  
Ala Lys Leu Ala Leu Ala Leu Lys Ala Leu Ala Leu Lys Ala  
20 25 30

<210> 164  
<211> 18  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (18)  
<223> AMIDATION

<400> 164  
Phe Ala Lys Lys Leu Ala Lys Lys Leu Lys Lys Leu Ala Lys Lys Leu  
1 5 10 15

Ala Lys

<210> 165  
<211> 13  
<212> PRT  
<213> ARTIFICIAL SEQUENCE

<220>  
<223> SYNTHETIC SEQUENCE

<220>  
<221> MOD\_RES  
<222> (13)  
<223> AMIDATION

<400> 165  
Phe Ala Lys Leu Leu Ala Leu Ala Leu Lys Lys Ala Leu  
1 5 10